THE GENESEE FARMER.

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THE GENESEE FARMER.

SATURDAY, FEB. 13, 1836.

Preparation of Haws.

Information is solicited by a correspondent, relative to the preparation of the seeds of the [English] White Thorn. He states that in the fall of 1833, he procured ten bushels of the berries, which he placed in a trough of leached ashes, where they remained until January 1835, when, during a favorable time, they were planted thickly in drills. No signs of vegetation appeared during the following summer; and an explanation of the cause is desired. Not knowing all the circumstances of the case, it would be difficult for us to assign the true reason with confidence. The vitality of these seeds are often injured by allowing them to remain too long together in large quantities, without stirring, or exposure to the air, by which they ferment, and sometimes rot. Burying them too deep in the earth sometimes produces the same result. The same treatment also prevents in a great degree the alternate action of freezing and thawing, which contributes chiefly to loosening the hard shell. In the experiment of our correspondent, the seeds appear not to have had the pulp removed from them after gathering; this frequently indeed is not done; but there is little doubt that it would contribute to their germination. In seeds of some kinds, this precaution is absolutely necessary. Success also depends greatly upon the manner of sowing.

Seeds of the white thorn are remarkably tardy in their vegetation, and the best preparation of them is consequently of importance. The following is the mode which has been most generally practiced with success. When the seeds are collected in autumn, mix them with at least an equal quantity of light sandy earth, (twice the quantity would be better,) and place this mixture in the form of a narrow ridge, on a dry spot of ground well protected by a fence, (a garden for instance,) so that they may not be disturbed by hogs, &c. Then cover this ridge with light earth an inch or two in thickness, and let it remain through winter. In the spring, turn the ridge, and mix the whole thoroughly together, and form it again into a ridge, covering it as before, and at least two inches thick. Repeat this again two or three times through the summer. Care should be taken that water does not settle about them. They may be sown either late in autumn or early in spring; but on account of exposure to mice, the latter is generally preferable. The practice of burying the seeds in the earth below the surface before sowing, exposes them to wet, and shuts out from them the action of the air and frost more than when exposed in ridges; it is not therefore to be recommended.

The sowing should be performed upon a piece of good rich ground, neither too elevated and dry, nor too low and moist; if done in spring it should be attended to as early as possible, as the seeds soon vegetate on the approach of warm weather. The ground however must not be worked while wet; but if this cannot be entirely avoided, and there is danger of the surface baking, light, dry and rich earth must be procured elsewhere sufficient to cover the seeds. Where the soil is light they should be buried about three quarters of an inch in depth; where it is of a heavy character, half an inch is sufficient. If a season of dry, hot weather comes on immediately after sowing, as is sometimes the case, the ground should receive frequent but gentle watering, until the young plants appear.

Geological Survey of the State.

Agreeably to a resolution of the Assembly of last year, the Secretary of State has made a report in relation to a geological survey of the state. He had been requested to report the most expedient method of obtaining a scientific and perfect account of its rocks, soils, and minerals, and of their localities; a list of all its mineralogical, botanical, and zoological productions with specimens; and an estimate of the expenses including the cost of publishing three thousand copies of such report with drawings and a geolooical map. We consider it a very able state paper.

The great importance attached to such investigations may be better understood by some of our readers, if we refer to the munificence of STEPHEN VAN RENSSELAER who employed Professor Eaton with assistants, four years in making a geological and agricultural survey of the district adjoining the Erie Canal, besides being at the expense of various other examinations of great extent. This was performed twelve or fifteen years ago. Since that time Massachusetts, Tennessee, the two Carolinas, and Maryland, have either caused or directed geological researches to be made within their respective limits; and Virginia, New Jersey, and Pennsylvania have the subject before them. With these examples in view we hope "the Empire State" will not prove recreant in the cause of science and practical utility, when her ample means so fully enable her to develope her own resources. The discoveries which her geologists may make, would be only a part of the benefits to be derived from this enterprize. Hundreds of her citizens would be stimulated to make closer observations; and when explorations shall be conducted in the broad light of science, we shall hear but little more of fortunes wasted in searching for minerals or of the fruitless toils of the miner.

A few years ago £80,000 sterling were expended in searching for coal at Bexhill in Sussex, England, "when," as Sir J. W. Herschell observes, "every geologist would at once have declared it abortive." "Mr. Townsend informs us," says Malte Brun, "that a pit was sunk for coal to the depth of six hundred fathoms at Bruham near the chalk hills of Bradley-Nole, and that the miners reached only to the uppermost beds of the great oolite. The history of mining operations in England abounds with such examples. It may be mentioned on the authority of the last writer, that the commlssioners of the Bath roads, sent ten miles for flints, while their wagons actually passed, without their knowing it, over a bed of flints for the greater part of the way. The stone of which the Bath Cathedral is built was conveyed from the distance of four miles; it was not then known that the same stone might be obtained in the immediate vicinity; quarries have since been opened. If errors of a like nature are now less frequently committed—if pits are not so often sunk in vain—it is because *practical men have availed themselves of the discoveries of geologists.*

To these statements we may add the expensive attempt to procure salt water on the south shore of Lake Erie, in the neighborhood of Portland, which any geologist acquainted with *the dip of the strata* would at once have pronounced hopeless.

The Secretary proposes to divide the state into four districts. The *first* to consist of all the counties lying to the south or east of Delaware, Schoharie, Schenectada, and Saratoga which are also to be included,—containing 12,263 square miles. The *second* district to comprise the counties of Warren, Essex, Clinton, Franklin, Hamilton and St. Lawrence,—containing 9,692 square miles. The *third* district to include all the other counties adjoining the Erie Canal and lying north of it, to the west bounds of Genesee and Orleans,—containing 12,293 square miles. The *fourth* district is to consist of the remaining (14) counties which are estimated at 11,594 square miles.

To each of these districts, it is proposed to appoint two geologists and a draughtsman; and one zoologist and one botanist for the whole state, each to be accompanied by a draughtsman. It is supposed that four years will be required to complete the survey; and the whole expense including that of publication, is estimated at $104,000. A lower estimate however, has been made on the suggestion of confining the examinations to geology; but we must indulge the hope that our legislators on this occasion will act with a liberality worthy of themselves and of their country.

Cions for Grafting.

There is no better time than the present for cutting cions for grafting, although it may be done any time before the buds swell in the spring.

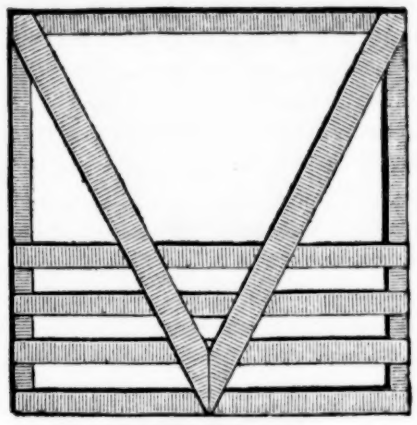
Those who wish to avoid the disappointment consequent to procuring varieties under false names, should be particularly careful to obtain them from the best sources. Great care should also be employed that no mistakes arise from careless labeling; hence the names should be attached to each kind as soon as the shoots are cut from the tree. Cions may be preserved until wanted in cellars. In order to prevent their becoming dry, the lower ends may be planted in earth just dry enough to crumble to powder. If they are kept too wet, they will not, when set, absorb so readily the sap of the stock, and consequently will be less liable to grow. They should therefore be kept so dry as just to prevent their wilting. Special care should be taken that they are out of the reach of mice.

Winter in Massachusetts.

Extract of a letter from a subscriber, dated Richmond, (Mass.) Feb. 3, 1836.

"The season thus far has been one of unparalleled severity. Our beautiful autumn closed on the night of the 20th of November by the grounds freezing moderately, and on the 22d, we were visited by a blustering snow storm from the north east, which continued through the day; since that time, now more than ten weeks, we have had uninterrupted sleighing, a circumstance extremely rare, even for *snowy* Berkshire. The weather has for the most of the time, been unusually cold. Dec. 16th, was two degrees colder than at any time last winter. Our only thaw, sufficient to waste the snow, was Dec. 25th and 26th, which was sufficient to lay the fields bare in many places. On the 27th, it was cold, and a coat of ice was found in the highways which kept the sleighing good. Jan. 8th, another northeaster commenced, which, with storm and wind, continued until the evening of the 10th, and on the 11th, the roads were nearly impassable. The snow of this storm was mingled with sleet and rain, the latter congealing upon the trees, and mailing them with an exquisitely beautiful coat of ice, which, daily replenished on our mountain districts by occasional fogs, retained its brilliancy for a week or more, and it was really a sublime scene to look upon,—to behold evergreens revealing their diminished leaves and branches from beneath their pellucid vestments, and deciduous trees bending beneath an accumulating mantle of purity, which threatened, should the winds visit them too roughly, to divest them of half of their now pendant branches. But the ice eventually gave way, and hastening to a firmer, safer retreat, left its former resting place without detriment to its airy rendezvous.

"Jan. 25th, severe snow storm from N. E. This snow lay tranquil enough, but was so extremely dry as to render pathing almost impossible,—it was like chaff to travel through. Jan. 31st, snow from south—prospect of a thaw at noon—wind changed to N. W., P. M., and commenced blowing—snow continued to fall till late in the evening. Feb. 1st, very boisterous—snow which fell yesterday and that of previous storm, in constant motion—roads impassable through the day, at night extremely cold. Thus far the actual depth of snow I have not been particular to ascertain. At no one time I presume, however, has it fallen more than 18 inches, and were the mass of it *now* level, I presume it would not measure more than three feet or three and a half at greatest extreme. When viewed with the *greater* quantity which has fallen west of us, though no farther distant than the Hudson, 30 miles, we consider ourselves favored, as the inhabitants of a country which is proverbially a snowy one. Hay from a short crop, is scarce—of course grain is in great demand. Prices as follows—Wheat, $1,50—Flour, $7,75—Rye, $1—Corn, $1—Oats, 50 cts., and each article scarce in market, the farmers fearing a demand from their own exigencies."



YARD RACKS.

The above drawing exhibits a convenient and cheap rack, which is used extensively in Orange county. The drawing was furnished for the Cultivator, and Judge Buel describes it as follows: "It consists of four scantling or other posts, six feet long, connected together by slats, strips of board six feet in length, and supported by diagonal braces extending from the top of one post to the bottom of the frame—the whole forming a six feet square. The slats are carried so high as to permit animals to reach the bottom over them—and it is advisable to floor the bottom. In these the straw or hay is put for the stock. The advantages which it offers are two—it prevents the fodder getting under the cattle's feet, and thereby being wasted—and it in a measure prevents the weak animals being driven from their food by the strong—four being accommodated at each rack without interfering. The number of racks can be graduated to the stock."

The (Boston) Horticultural Register.

This Magazine has entered on its second volume; and the first Number is embellished by a landscape engraving of superior beauty. It represents a view of the Park at Allanton House, from "*Stuart's Planter's Guide*," which was *wooded* by the transplanting machine.

A very large proportion of this Number, consists of original matter of great interest to the florist. Our attention was particularly arrested by an article from the pen of H. A. S. Dearborn *On the introduction of the vegetable productions of China*, which closes with an extract from Reynolds' Journal of the Voyage of the U. S. Frigate Potomac round the World in the years 1831-2-3-4. We present the following paragraphs, and we think his suggestions are deserving of great attention:

"A proper estimation, in this country, has never been placed upon the benefits which might result to agriculture, and particularly to horticulture, from an expedition to the coast of China. That country has a climate very similar to our own, arising from its similar position on the eastern edge of a great continent. This being the case, the vegetable productions suitable to the one, cannot but thrive well in the other.

"China has been a long time civilized, and the whole extent of its coast has been for ages under a government which has paid more attention to agriculture, than any other government that has ever existed. Under such circumstances it is impossible to be otherwise but that the vegetables and fruits of the various climates have been acclimated to a degree much beyond what they have with us, or in Europe, from whence we derive our fruits and vegetables.

"The territories of China, embracing both sides of the tropic of Cancer, we have every reason to believe, that *the productions of the south, have been extended as far as possible to the north*, and *those of the north to the south.*

"By getting therefore, fruits and vegetables from a country thus situated, we get the advantage of a thousand or more years of acclimation. For instance we get our apples and pears from England and France. *The apple we have not yet acclimated as far south as Georgia.* There are we believe only one or two varieties which in the upper part of that state, prove fruitful in some years. Their flavor is very indifferent. So with the pear.

"Who can doubt but that in a country in which the extension and prosperity of agriculture, have been the great object of government, their fruits and other vegetables have in the course of fifteen hundred years, *been gradually extending to the south*, so as to become used to a climate, which it will take nearly the same period to reach, with the varieties of fruits which we now have. It is the same with the fruits and vegetable productions of the south. The tropical fruits and vegetables must have been brought as far north as they can be possibly cultivated. From fifteen hundred to two thousand years have been passed in this process of acclimation.

"Why should we undergo this long process, when a few thousand dollars may introduce them among us?

The Sugar Cane.

"It is well known that among other plants, the sugar cane may be gradually introduced into a climate which was at one time uncongenial to it. The Otahite [Tahiti] has been introduced into Louisiana. What a gain it would be to our country if a variety could be procured which could be raised one degree further north than the Otahite [Tahiti!] The advantages from this single plant alone would a thousand times compensate for all the expenses of such an experiment. For the introduction into this country of the various fruits and vegetables which such a country as China must produce, might be attended with advantage almost incalculable."

As a confirmation of the correctness of these remarks, we refer to the *Morus multicaulis*, which has reached the U. States from different parts of the East where it had been acclimated. The first sort was introduced by the French from the Phillipine Islands, *within the tropics*, and it is always more or less injured by our winters, while the other

sort which has grown from seeds procured in China has resisted the greatest degree of cold to which our climate is ever subject. These considerations ought to stimulate the liberal minded to greater exertions.

The Olive.

In conuection with this subject, we may state that THE OLIVE flourishes in the Crimea on the north shore of the Black Sea, in the neighborhood of very rigorous winters. The following extracts are from (Bishop) Heber's Travels: "Below Koriess on the plains above the sea coast, are *some fine olive trees.*" Life, vol. 1, p. 258.—Again: "Perecop—We here with great regret quitted the Crimea.—It was really like being turned out of Paradise,—when we changed *olives* and cypresses, clear water and fresh milk, for the reeds, long grass, and the drainings of marshes." p. 262.

What follows will show the great degree of cold which the *Olive* must endure there in winter:

"All the countries bordering on the Euxine Sea are still subject to an annual severity of winter, of which the inhabitants of Britain can hardly form an idea.—The whole sea of Asoph is annually frozen in November, and is seldom navigable earlier than April.—This *remarkable severity of climate* on the *northern* shores of the Euxine, may induce us to give a proportionate faith to what the ancients assure us of its *southern* and *eastern* shores." p. 532–3.

When shall that *variety* of the Olive be introduced into the United States?

The Phlox.

From an article *On hardy herbaceous plants for ornamenting the parterre, border or shrubbery,* written in a pleasing, perspicuous style by Joseph Breck, we take the subjoined notices. It appears that no species of Phlox has been found native in New England, while in the Genesee Country we have at least two: P. divaricata and P. subulata, the former running into several varieties.

"Phlox Listoni*a* [?] In honor of Lady Liston; but I cannot ascertain who her ladyship was. A beautiful new species with fine red flowers in June; a foot and a half high. Foliage broader than in most species; radical leaves rhomboidal; upper ones ovate lanceolate."

This appears to be nearly allied to *P. ovata*, in its height, the color of its flowers, the shape of its leaves, and the time of flowering.

"Phlox Shepherdi*a* [?] Probably in honor of Mr. William Shepherd, curator of the Liverpool Botanic Garden. A beautiful species about three feet high, with purplish red flowers in long spikes or panicles. Leaves lance oblong; commences flowering the middle of July.

"Phlox carolina. A handsome species with ruby purple flowers in August, in sub-fastigiate corymbs. Leaves lance ovate.

"Phlox tardiflora. Flowers white, *arranged on long spikes;* two and a half feet high; last of August and September.

"These [with thirteen other species or varieties] are all that I have cultivated. The following are said to be fine, viz: P. glaberrima, P. suffruticosa, P. americana, P. intermedia, P. reflexa, and P. pilosa. One of the most desirable of the family is P. variegata: the leaves are beautifully variegated. This has been imported repeatedly, and as often lost. I am not certain whether it is in any collection in this region or not, but think it is not.

"It is a notorious fact that most of our beautiful North American plants from the west and south, have first been transplanted across the Atlantic to our English friends, and from thence find their way back to this country. The number of the species of Phlox has been greatly increased within a few years past, through the indefatigable exertions and persevering spirit of the lamented Drummond and Douglas, and other distinguished botanists. More than *sixty species* are found in the English Catalogues. Probably not half that number are in any collection in this vicinity."

We would remark that *P. paniculata* runs into many varieties, and at this time we have not less than three which are very distinct, and which have originated in our own grounds. We have observed on such occasions that new species are sometimes announced; and we are inclined to suspect that *P. pyramidalis* is only a variety of *P. paniculata*, because we have received from *two* botanic gardens of celebrity, a plant bearing the former name which is only a variety of the latter. But possibly it is otherwise. It would give us pleasure to send those three varieties, together with *P. ovata*, *P. setacea*, and some varieties of *P. divaricata* to this writer if we had his address.

We cordially recommend the Horticultural Register to the patronage of the public. Subscriptions (at two dollars a year) received by Reynolds and Bateham, *Rochester*.

IRRIGATION OF MEADOWS.

The advantages of this operation must be obvious to every one who has observed the luxuriance of the grass in swales and low grounds which are kept moist by streams; and an additional proof is furnished by the light crops of hay on dry knolls. The following account of a simple and efficacious mode of performing it, is copied from Sutcliff's Travels in North America.

"In many parts of North America, and particularly in this neighborhood, (vicinity of Philadelphia,) it is the practice of many farmers to reserve about 15 or 20 acres of land for hay, which they continue to mow from one generation to another, many of them laying on but little or no manure; but taking the advantage of situation where the land may be easily irrigated or overspread with water from time to time. By this means they obtain heavy crops of grass without the aid of manure, and thus supply themselves with winter fodder at an easy expense. On inquiring of two very respectable farmers, they informed me, that, upon an *average*, they got about *two and a half tons* per acre, each year, upon this plan. The land usually chosen for this purpose, is not a dead flat or marshy land, but commonly the two sides of a narrow valley of easy ascent on each hand, having a small stream running through the bottom. When the land is to be watered, the stream at the upper end of the valley is diverted from its natural bed, and is conducted in narrow channels along each side of the valley, on as high ground as the head of the stream will admit; and by placing obstructions to the current of the streams, in different parts of the artificial channels, the water continues to trickle down the sides of the valley, so as plentifully and regularly to water the roots of the grass, but not in such quantities as to cover the herbage."

We observe that some writers recommend the admission of the water upon the meadow not till late in spring. This is undoubtedly an error. *One* of the chief uses of irrigation is to convey, by means of the water, fertilizing matter over the surface, in order to enrich it. Consequently the greatest benefit from this cause, is to be derived when the streams are high and muddy, and filled with fertilizing substances. For the same reason, streams from cow yards, dung heaps, &c. should be conducted over the surface of meadows. And, as in many places, our public roads are made of the richest materials, streams filled with their washings may sometimes be turned upon grass lands with the greatest advantage.

For the same reason also, the water, especially where the artificial stream is of any considerable size, should be conducted by a very gradual descent, so as to form a slow current, as it is only then that it deposits the matter which it contains. "If water intended for irrigation moves slowly, it leaves its riches behind it; if it runs rapidly, it carries away the farmer's riches with it."

In order that the artificial channels may be made with a regular and very slight descent, an instrument for taking levels is absolutely necessary. This may be a horizontal rod (with points for sight at each end) kept level by means of a plumb line suspended along side of another rod attached perpendicularly to the former rod. Or a level may be made with a broad shallow vessel filled to the brim with water; this vessel may be supported on a stand made by inverting a staff in a hole in the center of a small square board; the vessel is placed on this, and may be made level by inserting wedges under it. This will be found more convenient than the former instrument. In using it, it may be placed on a spot of ground 3 or 4 feet lower than the intended channel, and, looking across the surface of the water, observe the line where it strikes the ground. Let another person place small stakes at convenient distances along this line; and through these stakes the channel is to be cut. In order however that there may be a little descent in the channel, the stakes must be varied accordingly. Another way of using it is to place it at the head of the intended channel, measure its height above the surface of the ground, and observe at what places on the ground it strikes a mark, on a rod held by another person, at an equal height from the surface. Another way of taking a level is to make a small dam in the stream, at each end of this dam to insert perpendicularly, a stake in the water, so that the top of each may be precisely the same distance above the surface; by looking across the tops of these stakes, the level is determined.

The water is generally taken from the channel by causing it to overflow the bank, or by removing a part of the bank; a safer and more uniform method of doing it, is to place small beams in the bank with holes in them, through which the water may flow.

COMMUNICATIONS.

LETTERS FROM A FATHER,

Living in the State of New York,

To his Son in Western Pennsylvania.

NO. VII.

Proper Use of Manures.

To MY SON—In this letter I am to answer the question—To the first and immediate use of what crops ought the dung of barn-yards, stables and the like, generally to be applied? To know how in all cases to make the best practicable use of dung, or of any manures, may not be an easy attainment. The farmer who can do this, is already master of one of the principal secrets of good farming. In order to practice in this concern systematically, and with that forecast which in such cases ought always to be employed, it will be necessary, oftentimes, to take a prospective view of the plans of business on the farm for several years to come. It should be the aim of every farmer to bring his whole farm, as speedily as possible, into a high state of cultivation, and to keep it so.

The corn crop offers greater inducements for the application of dung, than any other crop extensively cultivated in this country. Potatoes also require dung, and should receive plentiful supplies of that article, but in general the potatoe crop is cultivated only on a small scale, and of course but little dung is needed for its use. Future experience will probably teach you, and your fellow-citizens, that no inconsiderable quantities of manure may be profitably expended on your farms, in the culture of ruta baga, carrots, beets, &c. As a means of supplying a cheap and wholesome sustenance for stock, the root husbandry, including the culture of the roots here enumerated, and some others, is rising into public estimation, and already stands high in the estimation of many of the best farmers in the country. In general, it is not good practice to apply dung of any sort, especially that which has not undergone fermentation, to grain crops, such as wheat, rye, barley and oats. These crops may indeed be feasted, and sometimes, though rarely, benefited by the manure thus applied, but in general it is better to let them sit down to this feast, at the second or third table. You may not understand the import of this language—I will endeavor therefore to explain it.

We will suppose then that you have a certain field, now probably a meadow or a pasture, which you intend, after a year or two, to apply to the culture of wheat. What are the first steps to be taken in pursuance of this plan, and how is the plan to be executed? I answer—carry on dung plentifully in the spring—spread it well—then turn over the sward in a workmanly manner, and plant corn upon it. *Here* corn comes immediately after the manure, and of course, according to the phraseology above employed, it sits down to the feast at the first table. In the spring following prepare this ground for one of the summer crops, and sow upon it either barley, peas or oats. Either of these crops will come off early enough to be followed with wheat the same season, and the ground, if well tilled during the corn culture, and again in the spring, will be in fine order for that crop. *Here* the wheat will sit down at the third table, while the crop immediately preceding it will have had the honor of a seat at the second table. All these crops will receive their portions of the feast. When the wheat comes on to the ground, there will remain in it enough of manure to give to that crop a good meal of wholesome food.

The process here deliniated will admit of many variations. There may be circumstances, though I think not often in your case, to justify the practice of planting corn on the same ground two years in succession. When this is done, dung should be applied again, at least in moderate quantities, as a preparation for the second crop. While you cultivate no other crops than such as are now in general use where you live, your manure should be chiefly applied to corn and potatoes. These crops are voracious feeders, and dung may be given to them almost without measure. But as you will probably cultivate potatoes only on a small scale, by far the greater portion of your dung should annually be appropriated to the cornfield. It is believed there is no other use to which dung can be applied to greater advantage. When thus applied, it will have all the advantages of intermixture with the soil, while the weeds which it will be the means of introducing, will be destroyed by the operations of tillage. It should then be your care to appropriate every spring one field at least to the culture of corn. That field should be large enough to receive advantageously all the manure that you can spare for it, and yet not larger than can, from the supplies of that article at your command, receive a plentiful dressing. The next spring another field must be taken for corn, and be managed in the same manner, while *this* will be in readiness for a summer crop, and in the fall will become a wheat crop. Thus you will go on alternating your crops, and manuring your farm, field after field, until the whole shall be brought into a high state of cultivation.

I consider myself as laying down here only general rules. It is not supposed they will, in all cases, admit of a practical application. Some fields there may be that are not suitable for the culture of corn, and some that are not suitable for wheat. These general rules, therefore, must be considered as liable to many exceptions. A multitude of minor questions, relative to this and every other department of agriculture, must remain to be decided from time to time by the practical farmer himself. How important then that he be a man of good judgment, and of a sound and well cultivated mind! There is no other occupation, no other art practiced by man, nor any profession, for the practice of which an apprenticeship, or at least an appropriate and thorough cultivation of the mind, is more necessary than for the practice of agriculture. Here I close my remarks on manures.

Green Crops for Manure.

There are other means of which farmers may avail themselves to improve the fertility of their soils. One of these, and the one to which I chiefly allude, is the practice, now becoming quite prevalent, of turning under green crops, such as buckwheat, clover, &c. This is a cheap and expeditious method of improving light soils, and I recommend it to your consideration. Your own mind, awake as it should be to every practicable means of improving your condition, will readily suggest the expediency and the manner of its application. The green crops, at about the time when they are in blossom, are to be turned under ground with a plough. There they are to lie without any subsequent disturbance, and there they will undergo the like processes as other dung, and contribute largely to improve the soil, and benefit the crops that may subsequently grow upon it. Although the disposal of valuable green crops in the manner here suggested may, at first thought, appear to be a wasteful practice, yet I have no doubt that, in many cases, they may be so disposed of to very great advantage.

Value of Clover.

I am not willing to take my leave of these kindred subjects, without paying a small tribute of respect to clover. As an improver of the soil, clover stands pre-eminent above all the other grasses cultivated in the country. So many are the useful properties of clover, and so many and so important are the uses to which it can be applied, that unquestionably it ought to be considered as the most valuable of our grasses. Even herdsgrass, or timothy, excellent as it is, could be spared with less injury to the agriculture of the country than clover. Admitting what many suppose to be the fact, that clover, when used either for pasture or hay, is not so palatable to all sorts of stock as some of the other grasses—admitting too that the expense of cutting clover and curing it for hay is greater than that of the other grasses, yet there exist many good and sufficient reasons to justify its general and extensive culture. The produce of clover is far greater than that of any other grass, and although it may not be the most palatable to all sorts of stock, yet it is sufficiently so to answer all the purposes of pasture or hay. In the use of clover alone, I have scarcely had any experience, but a mixture of clover and herdsgrass has been found in my own husbandry to make excellent pastures, and first rate hay for stock of every description.

But it is not to the abundant produce of clover, nor to its palatable and nutritive qualities, that we are to look for its principal excellence. As an improver of the soil, it stands unrivaled. Some of its peculiar excellences, by which it is distinguished from other grasses, are the following. It receives plaster to far greater advantage than any other of the grasses—it meliorates and improves the soil in a very peculiar manner—it produces an excellent green crop to be turned under for the purposes of manure—and it forms a peculiarly tender sward, which is of great use in agriculture. The sward of clover, or the clover lay, as it is frequently called, is in itself almost a preparation for any other crop. It needs only to be turned over to put the ground in first rate order for wheat, or any thing else. I do not recollect that I saw any clover of the variety of which I speak on your farm, or on any of the farms in your vicinity, except in one instance. In neglecting to cultivate this important plant, you keep yourselves behind the times, and behind your own interests. I advise you to introduce clover into your farm, with all practicable speed. A FATHER.

New York State, December, 1835.

ON DRAINING.

BY JAMES CANNINGS FULLER.

About two years since I purchased a tract of land, and at a short distance from the house was a piece called the Swamp; and truly it was no misnomer, inasmuch that oftentimes when walking in it have sunk in mire to the depth of a foot or more.

At the time of purchase, this piece of bog was an eye-sore, and had I not thought there was sufficient draught to drain it would not have bought the farm, which had been previously owned by a man who had done not a little for the improvement of the soil, and encouragement of a good breed of sheep, horses, &c., and who had attempted by open drains to carry off the superfluous water rising on it, and that also flowing from some springs not for distant. The success of draining this piece of bog, or swamp, and the novelty of application of material used, induces me to forward for insertion in thy useful and instructive paper some account of it, whereby any of the readers of the Farmer having similar land, may *this* coming spring test the experiment for themselves, and I believe they will not have reason to repent the trial.

The land measures not less than ten acres—the subsoil in some places clay, others sand, and here and there quicksand, abounding with numerous springs. There being considerable difficulty in procuring stones for draining, induced a resort to wood, which fully answers my most sanguine expectations. It may be asked, how long will wood endure in drains? If it be *green* when used, doubtless it will answer the purpose for at least seventy years, but should it continue but twenty years, the vast improvement effected would justify the expense of draining with wood, where there is a scarcity of stone, at twice its cost, for I believe there is not a better piece of meadow land in the township than the piece in question can be made. Last spring in these ten acres I had two drains of one hundred and eighty rods dug, and in lieu of stones used hemlock cord-wood. One cord of wood being sufficient for seven rods of drain, the digging, laying the drain, and refilling, cost twenty-five cents per rod, or forty-five dollars for the whole. In early part of fifth month, just after the snow storm, there was not less than from 16 to 18 hogsheads of water per hour discharging from one of these drains, and a large quantity from the other. I have been asked to furnish the Genesee Farmer with some particulars of this experiment, and would have done so soon after its completion, but thought it better to see what effect the winter would have on the drains before promulgating the experiment, and have now the satisfaction and pleasure to state the drains continue to draw *well*, and are not affected by the frost. The application of wood, even where stones are plenty, for draining spots of quicksand, is excellent. On another part of the farm, which was drained in the fall of 1834, stones were used for making the drain, and soon found that on quicksand spots it shortly filled up in consequence of the stones *sinking*, and the sand raising itself—*twice* have endeavored to rectify it by opening and clearing the drain and relaying the stone, but now find must reopen it, which when it is done shall resort to the use of wood.

In conclusion I may add, that about seven acres of the drained swamp was ploughed last season, and planted to corn, and Swede and other turnep seed sown under the corn. The corn was an indifferent crop—the turneps in some places good.

Should any of the readers of the Genesee Farmer, in traveling this way, wish to see these drains, and the effect produced by them, if they will do me the pleasure of calling it will be gratifying to show it them. The effect is palpable, inasmuch as there are about three acres not ploughed, the surface of which is nearly covered with pismire batches, many of them from 12 to 18 inches high, and these three acres shall not plough this spring, leaving them untouched for *comparison sake*.

Respectfully thy friend,

JAMES CANNINGS FULLER.

Skaneateles, 2d mo. 3, 1836.

"HIGHWAYS AND BY-WAYS."

BY JAMES CANNINGS FULLER.

Just after writing the foregoing, No. 5 of the Farmer came to hand, containing an article headed "Highways and By-ways," from a correspondent whose pen for more than two years had not been used in compiling or composing an article for the Farmer, although the Editor had, in "very flattering terms, conveyed his thanks" for a former communication, and solicited a continuance of them. Now after reading this, my expectations were excited for something extraordinarily correct; but how can it be stated, that in the last thirty years in the western part of New-York, more has been done to the roads than on any equal extent of ground *in England for perhaps as many generations?* I confess it is beyond my ken, unless it arises from the author's lucubrations of the pillow during the last two years, for in that time the sleep of many of us has been disturbed by dreams. The position I believe is altogether incorrect, for having traveled in twenty of the counties of England, and extensively in most of them, (and there are but forty,) can certify that in no part of those twenty counties can be found such turnpike road as lays between Buffalo and Batavia, or as between Auburn and this village. I have nothing to say, although a "foreigner," "in derision of our roads," believing it nearly impossible so to do, but feel desirous the readers of the Genesee Farmer, on so interesting, and to them, as well as all others who travel, important subject, should know the truth. It is said, "to extol the English road system is extolling our own system;" would it not have been quite as correct to say, *here we have no system;* and is it not too true that our repaired (so called) roads are oftentimes more dangerous to travel on shortly after the highway duty is done in the spring of the year, than previous to the expenditure of labor.

By way of illustration I will mention a fact which came under my notice last spring. Having occasion to call on a scientific and practical farmer who lives by a road side on which I had traveled to get to his house, I remarked on the depth of some of the holes and ruts, and the dangerousness of driving on the *repaired* part; he replied, "it was repaired but yesterday and instead of doing the road good it is *damaged* more than twenty-five dollars by what has been done," and I fully admitted the correctness of the remark, being enabled to do so from having been on the road a few days previous. It is said English farmers have to pay toll upon the roads which they have been assessed to make, or mend *gratis*. Do not American farmers pay toll on turnpike roads? and in buying a farm is not the road paid for as much per acre as any portion of the purchase? It should be known that all occupants of the soil in England are not liable to perform statute duty on the turnpike roads, *nor are any liable, unless the tolls are insufficient to keep the road in repair and pay the interest on the debt.* It may be as well to give two illustrations showing the fallacy of the statement, and also for the readers of the Farmer to know to what extent capital is expended in that country on turnpike roads; and then see if it is within the *verge of probability* "that more has been done in this western part of New-York these last thirty years, than has been done on any equal extent of ground in England for perhaps *as many generations.*" The farm of one hundred and eighty acres, which I had occupied for thirteen years previous to leaving England, I never did any turnpike road statute labor for or paid any compensation in lieu thereof, nor did any occupier in the Parish, and though it lay on a turnpike road, in which district of road there were forty miles, and the outlay thereon, with interest on debt, averaged in 1832 *one hundred and thirty pounds sterling per mile,* ($624 per mile) which sum was raised by tolls. To say it never so happened that a team under particular circumstances started at midnight I cannot deny, but this I know, that eight hours constitutes a day's labor on the turnpike or highways for man or beast. I shall not contend by comparing "our incomparable ridge road," this *ridge* road being constituted by *nature* and not by art, therefore it may be "incomparable," but ought it to be so? Now while I acknowledge the pleasure experienced in traveling over it, let me ask, ought not labor and art combined to have produced something to compare with this "incomparable ridge?" It is attempted to account for having broad wheels, by saying "in order to prevent their sinking into the clay," on what is termed by-ways, which by the bye, ought to be expressed highways, England having no by-way roads. The broad wheels are used by farmers to prevent cutting pasture land, or on fallows to prevent their sinking. I think I am fully justified in saying, that in my travels I never saw any highway road in England in such a wretched state as the turnpike roads are here in spring and fall, *from the city of Buffalo to Washington city.* The real object of the writer does not appear until towards the close of the communication, and here we differ in toto, believing there never will be even *tolerable good* roads until we farmers are compelled to pay in dollars and cents the highway rate. With respect to the comparison in the last paragraph, would say "nothing extenuate or ought set down in malice," having no wish to claim "superiority," nor any thing to ask excuse for, not even that of "excessive love of country," will therefore conclude with the good remark which may be found in the same Farmer containing the communication to which the preceding remarks reply, "From the experience of

others do thou learn wisdom, and from their failings correct thine own faults," and again subscribe myself thy friend.

JAMES CANNINGS FULLER.

Improved China Hog.

BY. C. F. C.

FRIEND TUCKER—While perusing your useful paper, I have observed some interesting remarks on the management of hogs, improved breeds, raising, feeding, fattening, &c., but have not as yet found a parallel to a small boned, and short legged pig, of the improved China breed, which we butchered last month, being eight months and six days old, and weighed (after being dressed) 345lbs., and sold to David Carson, Dalton, Mass., for 7½ cts. per. lb., amounting to $25,87½.

This pig had the same fare as our common store pigs, until Oct., then he was taken into the pen and shared with our fatting hogs about two months, fed three times a day, on boiled potatoes, mashed with a little corn meal, and some kitchen or dairy slop sufficient to give a good relish, and permitted to ferment a little before feeding. Then fed on corn meal, with a little wash from the kitchen for about four weeks, making about three months time of fatting; we then found his legs incapable of sustaining the weight of his body, with any degree of safety; for a sure and speedy remedy for this, the knife was found effectual. C. F. C.

New Lebanon, Feb. 2d, 1836.

The American Silk Grower's Guide,

Or the art of raising the Mulberry and Silk on the system of successive crops in each season. By WM. KENRICK. Boston, G. C. Barrett, and Russell, Odiorne & Co.—1835.

Among the evidences that our country has made very auspicious beginnings in the growth of the mulberry and the manufacture of silk, is the number of works published on these subjects. The one under consideration is a 12 mo. of only about 100 pages, and yet containing directions sufficiently full on these important sources of domestic thrift and national wealth: so simple and so free from mysticism have become these arts—a consequence of our free institutions. On the supposition that we warily watch the legacy of freedom from our forefathers and imitate their virtuous deeds, we may look upon the introduction of the mulberry and silk worm as an additional presage of our country's prosperity and greatness. The current that has hitherto borne us along has been strong, and if it receives this additional stream, it cannot fail, under a kind Providence, of carrying us into streams truly delightful in themselves, and affording rich anticipations.

The following extract suggests one of the numerous advantages attending this culture.

"This culture alone," says Mr. Kenrick, "is wanting to render the less fertile sections of our fine country rich. Before the introduction of the mulberry into the less fertile districts of Languedoc, in France, the inhabitants, it has been stated, were miserably poor, though now they are among the richest in the kingdom." If such happy results have attended this culture in Languedoc, still more favorable ones may he expected in our country, where our prolonged climate will admit of a second crop and successive ones in the same season. This is so peculiarly characteristic of our country, compared with the silk growing district of Europe, that Mr. Kenrick calls it the *American System*. By using the eggs of the previous year for the second crop, great advantages will attend this system. Even by successive crops 250,000 worms of four or five different ages, will not require more space than 100,000 if hatched at once, and the same number of hands, with the same labor, will make more silk. It is to be hoped every owner of land will be sufficiently patriotic to plant the mulberry and to read Mr. K.'s little work. S. F.

Successive Kinds of Forest Trees.

BY S. F.

It is said that on cutting off woodland, another kind of tree often succeeds. I would wish to inquire of your readers if this has ever been known to have been the case with trees that produce sprouts, unless they were very old. Full grown aged trees will either produce no sprouts or very feeble ones. S. F.

PRIMULA MISTASSINICA.

BY W. W. B.

Of the interesting family PRIMULA, deservedly so great a favorite with the florist, this species is by no means the least interesting. To the American botanist it possesses peculiar interest, as being a native of our country, but *very rare*. In the botanical works which we have consulted, there is no locality of this plant given in the United States. Michaeux found it in Canada, and Eaton in his Manual gives this as the only known locality in America. Torry makes no mention of it in his flora. In the summer of 1833 we found this little elegant plant growing in a gulf at the head of the Crooked Lake. The plants were found attached to a ledge of rocks of slate and graywacke, through which the water continually percolates so as to keep the ledge wet. What peculiarly characterizes this species, is its extreme *minuteness*. It is a perfect *miniature* of the cowslip family. The leaves are scarely as large as the finger nail, round—spatulate. The scape is about two inches in length, supporting an umbel of two or three little delicate pink colored flowers. We have furnished a botanical friend with several of these plants, who has succeeded in cultivating them in his garden, and who informed us this last fall that he had sent some of them to Europe. They are worthy of a place in every choice botanical collection. W. W. B.

Singular Phenomenon.

BY H. A.

On the farm of Alva P. Beman, of West Mendon, is a well sunk in a coarse gravelly soil, thirty-eight feet through to the clay, the last eight feet but little intermixture of earth. At the bottom, between the gravel and the clay, comes in a large stream of water, which rises about three feet—the fountain is but slightly effected by drouths or freshets. This well is located in a bend or ox bow of the Honeoye creek and on an elevation of sixty or seventy feet above it. About forty rods south and one hundred rods north are the banks, from which issue living springs of water that never freeze. Also, about twenty rods from it is another well sunk through the same kind of soil a few feet deeper, from which issues a cloud of vapor in winter as from deep wells generally. But the water in the well in question freezes every winter, and so hard the past winter as not to be broken by a stone the size of a man's head let fall upon the ice from the top of the well. It is never clear of ice till about the first of June, and in 1834, Mrs. B. drew ice from it on the 25th of June.

A philosophical solution of this curious phenomenon is requested. Friday night last it froze about 3-4 of an inch thick. H. A.

West Mendon, Feb. 8, 1836.

From the Ohio Review.

CULTURE OF RUTA BAGA.

If you think the enclosed worthy a place in your columns, you are at liberty to insert it.

Having seen much published upon the subject of raising ruta baga, all of which has fell short of the crop I took last fall from a small piece of ground, I am induced to give, not only the amount, but the manner of cultivating. To give the amount alone of any particular crop, without the manner of cultivating, is no benefit to any one.

I had a piece of dry sandy land, facing the south, which I wished to prepare for a fruit garden, and make more rich and level than I could do by ploughing. I therefore covered the ground about an inch thick with manure, and with a spade dug and turned in the whole, to the full depth of the spade, taking care that each load was covered as soon as possible after spreading to prevent loss by evaporation. This was done, or finished, the 5th of June. I then waited until I discovered indications of rain, which I think was on the 10th of the same month, when I immediately took a hand with me and commenced raking the ground with an iron rake. I next took a large rake made of three inch scantling, with five teeth, *fifteen* inches apart, and having a man to hold, drew it across the ground, the direction which I wished to have the rows run, making five marks. After that, we placed one outside tooth in one outside mark, making four marks, until the whole was completed. I then dropped the seed quite thick in every row, except the last eight, where I skipped every other row, leaving them thirty inches apart, instead of fifteen. They came up in a very few days. I then took of gypsum one part, of ashes two parts, and having mixed the same, sprinkled about a quart per rod on each row.

In five or six days I thinned them out, so as to leave them from four to six inches apart. Ten days after I hoed them again lightly, and gave them another dressing as before, which was all the labor bestowed upon them, until they were pulled.

From five rods of the ground planted fifteen inches apart, I gathered 61 bushels, measured in a two bushel measure, weighing 58 pounds to the bushel, which would make 1,952 bushels to the acre, or 113,216 pounds, equal to 50 tons 1,216 pounds. From the ground where the rows were 30 inches apart, the yield was at the rate of 1,434 bushels to the acre, the turneps larger, consequently not quite so heavy per bushel. One of the largest weighed 15 lbs. The above statement may appear incredible, still it is true. I was at first loath to believe it myself, and went and remeasured my measure, examined my figures, and found that all was correct, and "that facts are stubborn things."

In submitting this to the public, I am influenced less from a desire to boast, than from a sincere wish to have others communicate the result of their experience in agriculture, thereby benefiting community at large.

Respectfully yours, WM. WETMORE.

Stow, Jan. 22, 1836.

Let every man do as he pleases, it concerneth not you what another man doeth, provided you are not injured by it, or it interfereth not with your plans and pursuits.

From the New England Farmer.

LUCERNE.

Dear Sir—In your last Farmer I noticed a communication from that dirtinguished agriculturist, Hon. Samuel Lathrop, of West Springfield, on Indian corn, closing with an inquiry concerning Lucern or French Clover. Desirous that this clover should be fairly tried in field culture, induces me to communicate through your valuable paper to him and the public, an experiment made in the year 1827, at the House of Industry Farm, South Boston. The land in front of the house was quite uneven, and to bring it into shape, it was resolved by the directors to raise the land in front of the house, and finish with a glacis of about two hundred and fifty feet in length, with a slope of about sixteen feet. This bank was made of a fine sandy soil, with a finish of free loam, not rich, with an intention of sodding, but finding it to be very expensive, it was resolved to try the lucerne, knowing it had a long tap root, which would probably preserve the bank from gullying out. It was prepared, and the seed sown the latter part of May; soon after a high wind drifted the bank to such an extent, that the set was pretty much blown off; it was repaired and sown again about the 10th June, and watered; the seed soon came up, and did well. In October, roots of grass were pulled up, measuring thirty inches in length. It has been mowed since then five times a year, yielding a good crop. I have sown it since with wheat, which was a failure. I would recommend any one who has a light, free, alluvial soil, to try a little of it alone, as an experiment. In an adhesive, cold, wet, or stony soil, it should not be sown; but on the rich, free, alluvial soils of Connecticut, much may be expected from it; the great secret being a freeness in the soil, to accommodate the tap root, which will enable it to stand the drouth. I know of no grass that will give the yield, (where it is suited to the soil,) or is more satisfactory to the sight of man, or the taste of beast, than a field of Lucerne Clover.

Yours, with respect, B. V. F.

ON IRRIGATION.

From Davy's Agricultural Chemistry.

The advantages of irrigation, though so lately a subject of much attention, were well known to the ancients; and more than two centuries ago the practice was recommended to the farmers of our country by Lord Bacon. "Meadow-watering," according to the statements of this illustrious personage, acts not only by supplying useful moisture to the grass; but likewise the water carries nourishment dissolved in it, and defends the roots from the effects of cold.

THE MONTHLY GENESEE FARMER AND HORTICULTURIST.

Published on the first of each month, in Rochester, (N. Y.) by LUTHER TUCKER.

THE Publisher of the Genesee Farmer, at the solicitation of many friends of Agricultural improvement in Western New-York, has issued the first number (for January, 1836,) of a monthly periodical, under the above title, which, while it will embody much of the practical matter of that well established paper, will be furnished to subscribers at the exceeding low price of FIFTY CENTS A YEAR. It is believed that such a work is much wanted to supply those who are unable or unwilling to take a higher priced Agricultural paper, and that its general circulation among our Farmers, cannot fail to promote their private interests as well as the public prosperity. The course and standing of the Genesee Farmer is so extensively known, that it is not necessary to say more than that the Monthly Farmer and Horticulturist will be made up of the most practical and useful articles which appear weekly in that work. It will be handsomely printed, 16 pages octavo to each number, making an annual volume, with Title-page and Index, of 200 pages. The payment will in all cases be required IN ADVANCE.

☞ Seven Copies for Three Dollars—Twelve for Five Dollars—or a commission of 20 per cent. allowed to Agents on all sums amounting to $5,00 or more—the money to be sent free of postage.

Rochester, N. Y., January, 1836.

Meteorological Table,

KEPT AT ROCHESTER, FOR JANUARY, 1836.

Days.	10 A. M. therm.	10 A. M. barometer.	10 A. M. winds.	10 A. M. sky.	10 P. M. therm.	10 P. M. barometer.	10 P. M. winds.	10 P. M. sky.
1	34	29.45	W	fair	35	29,65	S	fair
2	36	29,45	W	do	29	29,85	W	do
3	32	29,95	E	do	30	29,90	N E	do
4	38	29,70	S	cloudy	47	29,55	S E	cloudy
5	38	29,60	E	do	38	29,70	S E	do
6	40	29,85	E	do	37	29,85	E	fair
7	35	29,75	S	fair	34	29,60	S E	cloudy*h*
8	36	29,45	E	cloudy*a*	35	29,40	E	do*e*
9	36	29,35	N W	do*b*	32	29,35	N W	do*i*
10	32	29,45	N	do*a*	29	29,50	N	do*i*
11	28	29,50	N W	do	27	29,55	N W	do
12	32	29,50	W	fair	36	29,50	S W	do*j*
13	38	29,65	W	do	34	29,60	W	do
14	33	29,70	S W	cloudy	28	29,75	N W	do
15	23	29,85	N W	do*c*	15	29,85	N W	do
16	23	29,90	W	fair	14	29,65	S W	fair
17	29	29,40	S	do	28	29,15	S E	do
18	32	29,10	W	cloudy*d*	26	29,35	N W	do
19	23	29,55	N W	do	21	29,70	W	do
20	26	29,85	N E	do*d*	17	29,80	E	do
21	36	29,50	S W	fair	40	29,30	S W	cloudy*k*
22	25	29,40	N W	cloudy	13	29,50	N W	do*l*
23	14	29,85	N W	fair	16	29,90	N W	fair
24	20	30,00	S W	do	24	29,80	S	do
25	28	29,55	E	cloudy*e*	24	29,55	N	cloudy*f*
26	24	29,50	N W	fair*f*	12	29,60	N W	fair
27	12	29,55	N W	cloudy	06	29,60	N W	do
28	12	29,70	W	fair*g*	14	29,55	W	do
29	20	29,50	S W	do	29	29,40	S W	do
30	34	29,40	S W	do	34	29,30	S W	cloudy*a*
31	26	29,30	N W	cloudy	13	29,35	N	do

MEANS.—Ther. 27.6—Bar. 29.60—Snow 29 inches.

a Snows—*b* rains—*c* spr. water 48°—*d* snows, ½ inch—*e* snows, 6 inches—*f* snow 1 inch—*g* sunrise 2° above zero—*h* rain and hail—*i* stormy all day, 6 inches—*j* thaws, fine sleighing—*k* thaws fast—*l* snow 2 inches.

January has been a month of uncommon severity. The prevailing wind has been west of the meridian, and northerly a very great proportion of the entire month. The ground was bare till the 8th, the date of the commencement of an easterly snow storm, which continued with great violence till the morning of the 10th, when it measured on a level 18 inches. Observation will confirm the remark, that great falls of snow, as well as rain, upon the northern and middle states, come from the north-east. Their violence is greatly mitigated on their passage, by counter currents of air, and the expenditure of thin moisture, so that what on the sea coast and New England is a rainy season, or a northeaster, in the interior states may amount to little more than unsettled weather, or a storm of a few hours duration.

There is a point of deposition, or a degree of temperature, at all states of the hygrometer, at which the vapor of clouds will descend to the earth, and this must continually vary in every storm, until from a want of coincidence in these two states it ceases altogether. Hence whatever raises the temperature, or diminishes the moisture, produces the same result of abating the storm; and when both are combined and operate with energy, clouds are immediately made more buoyant, or dispersed altogether. In this manner the storm is wasted in the interior by currents of warmer air, and the depositing of their substance as the temperature condenses it. In the storm of the 8th, it was found that its depth was the greatest some 300 miles east; in Rochester it measured 18 inches, and in Buffalo the ground was not covered when it ceased.

List of Payments

For the Farmer from Feb. 5, to Feb. 12, 1836.

For vol. 6.
Wm. P. Rollo.
R. Swift.
Jesse Hawley.
Henry W. Bishop.
Wm. Bacon.
Henry Werden, Jr.
Eleazer Williams.
Westell Willoughby.
C. S. Lobdell.
Joseph C. Loomis.
John D. Coe.
Gabriel Tappan.
Edmund Kirby.
Lothrop Fellows.
Wm. Parsons.
J. L. Hovey.
D. W. Cropsey.

For vols. 5 and 6.
Moses Fuller.
R. C. Gappel.
Guleelmus Wing.

For vols. 4 and 5.
Mrs. Arthur Burtire.
Amos Tyrell.

For vol. 5.
Guy Hayes.
Hiram Lozell.
G. B. Chase.
H. Woods.
James Sibley.

Last half vol. 5.
Chauncey Warren.
Robert Huntington.

Sylvanus H. Nichols, from July 1, 1835, to Jan. 1, 1837.
Jared Patchen, for 1st ½ vol. 7.
S. Thayer, for vol. 5 and ½ of 6.
Ezra Lay, from Oct. 1, 1835, to Oct. 1, 1836.
Col. P. Delatre, from July 1, 1834, to Jan. 1, 1836.
Mr. Irving, for vols. 1, 2, 3, 4 and 5.
John Christie, vols. 6 and 7.
Elias Cost, for 1st ½ vol. 6.

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RED CLOVER of the different varieties, and from different sources, *White Dutch Clover*, *Lucerne*, or *Dutch Clover*, affording 3 or 4 crops in a season, and some other foreign varieties, constantly for sale at the ROCHESTER SEED STORE by

REYNOLDS & BATEHAM.

January 28, 1836. jan 30-ar3wf4w

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CONSTANTLY for sale at the ROCHESTER SEED STORE, *Timothy* or *Spear*, *Red Top* or *Herds*, *Orchard* or *Cocksfoot*, *English Ray*, *Pacey's Perennial Rye*, *Italian Perennial Rye*, and several other foreign grasses, most of which have been successfully tried in this country.

N. B. Cash paid for Grass Seed, Beans, Peas, &c.

REYNOLDS & BATEHAM,
No. 5, Arcade Hall.

January 28, 1836. jan 30-ar3wf4w

Fresh White Mulberry Seed.

100 POUNDS of *Genuine White Mulberry Seed*, raised in Connecticut, and warranted the growth of 1835. For sale at the sign of the "GOOD SAMARITAN."

Hartford, Conn., Jan. 5, 1836. jan 16-f4t*

Seed Corn.

THE subscriber has a quantity of the celebrated 12 rowed Dutton Corn, raised by J. Buel. The advantages of raising this corn are its prolific qualities, being easily made to yield from 70 to 80 bushels to the acre, and itsearly maturity, ripening in about 100 days from time of planting.

W. THORBURN, Seedsman,
347 N. Market-st. opposite Post Office.

Albany, Dec. 25.—j9

The Silk Culturist, & Farmer's MANUAL.

"THE object of this publication is to disseminate a thorough knowledge of the cultivation of the Mulberry Tree in all its varieties, the rearing of Silk Worms, the production of Cocoons, and the reeling of silk in the most approved method."

Itwill also contain interesting matter on Agricultural subjects generally.

Published monthly at Hartford, Conn., by the Hartford County Silk Society, at 50 cents per year, in advauce. Subscriptions received at the Rochester Seed Store, by

jnly 25 REYNOLDS & BATEHAM.

COBB'S MANUAL OF CULTURE OF SILK, &c. for sale by

HOYT & PORTER.

COMMUNICATION.

Curious Relic of Antiquity.

We have now before us a very curious and interesting specimen of ancient art, recently presented to us by a friend,—the work probably of a people who inhabited this country previous to the present race of aborigines; for it displays a perfection in the arts far surpassing the rude state in which they at present exist among this people. This relic was found in Michigan, in one of those ancient fortifications which are scattered over our country. It is a piece of sculpture, the material of which resembles, somewhat, black slate, but is as hard as flint. A knife will make no impression upon it. It evidently must have been carved when in a softer state than the present. It was probably formed of some earthy material into a proper consistence to be cut and was then hardened by baking. The figure is that of a female sitting on the ground, in an attitude and air of sadness and despondency, leaning her head upon the back of her left hand, the elbow resting on the top of a small vessel in the form of a cask; the right hand resting on the knee and holding something which appears to have engraved on it some written characters, but which are too small and indistinct to enable us accurately to discern their form. Over the head is thrown a loose drapery, falling down upon the shoulders and back, leaving the left arm on which she reclines, and the left breast naked, but folding across in graceful folds over the right arm and breast, and covering the front part of the figure. On the fore part of the head, which is not covered by the drapery, the hair is gracefully parted and hangs down a portion of it in tresses upon the left breast. The little cask on which she leans, shows the staves in regular order, with three hoops at the top, and two at the bottom. The head of the cask comes up even with the chime and seems to be formed of narrow strips like the staves; on the front part of the cask there appears to have been something attached like a handle, but of what form is not distinguishable, as a portion of the front part of the figure is broken off. Around the cask lengthwise, over the hoops, passes something like a band, which was designed perhaps, for the purpose of carrying it. From the size of the vessel, compared with that of the figure, we should judge its use was to carry water. Every part of the figure and its appendages, is very distinct, and the sculpture admirably performed, and yet the whole height, by exact measurement, is but *one inch and an eighth*. The head which displays very perfectly the features, and even a countenance indicative of woe, is not larger than *a good sized pea*. What this tiny figure was meant to represent; when was the age in which it was made, and who were the people whose ingenious artists could produce such works,—are interesting inquiries, but which will probably never be satisfactorily answered. With it, we were told, were found several other curious specimens of sculpture representing animals and trees, and formed of the same black material.

The care-worn and woe-begotten countenance of this figure, and the attitude in which she appears, forcibly reminded me of the afflicted outcast bond-maid, Hagar in the wilderness, with her exhausted bottle of water sitting and bewailing her unhappy lot, at a distance from her little Ishmael, that she might not behold the child perish with thirst. We only want a view of the little fellow lying under the bush on the parched ground, to make the allusion complete.

January 24th, 1836. W. W. B.

Substitutes for Bread.

The (Boston) Horticultural Register for February contains an article on "Bread Corn and its Substitutes," by Mr. Wm. Kenrick, from which we copy the following descriptions of plants which serve in different countries as substitutes for Bread.

Plantain and Banana.

The Plantain and Banana are herbaceous perennial plants of the same species, which differ somewhat in appearance, but are yet sometimes confounded. Dampier has called the plantain, "the King of Fruits." Some assign the nativity of the plant to Guinea, and some to the East Indies, and Egypt. The plantain rises with a soft, herbaceous, conical stalk, fifteen or twenty feet high, with leaves issuing from the top, six feet long and two broad. The fruit is produced on its summit in spikes, which sometimes weigh forty pounds.

The fruit is of the size and form of the cucumber, but pointed at both ends; pale yellow, soft, sweet and luscious. It is used for tarts, sweatmeats and confectionary. Also roasted, or broiled, or boiled, with salt beef, and salt fish or pork; it is preferred to bread.

Dr. Wright has stated, that the Island of Jamaica would scarce be habitable without the plantain, as no species of provision could supply its place. A plantation affords a succession of fruit for a whole year.

The *Banana* is shorter and rounder than the plantain. It is more mellow, and is eaten raw or roasted, in fritters, preserves, or marmalade; and the fermented juice affords an excellent wine. M. Humboldt has calculated, that the same ground which will produce four thousand pounds of bananas, will only produce thirty-three pounds of wheat, and ninety-nine pounds of potatoes.

Arrow Root.

The Arrow Root, or *Maranta*, is a native of South America. The roots are tuberous and jointed. They produce a starch, one of the most nourishing of vegetable substances. A plant extremely productive; as two small tubers produced twelve bushels in two seasons, at St. Helena. This plant will flourish in the Southern States.

Bread Fruit.

The Bread Fruit Tree is a native of the South Sea Islands, where it grows to the size of the oak. The fruit is round, the size of a melon, the skin covered with protuberances. The inner part is of the consistence of new bread, and as white as snow. It is roasted before it is eaten, and is of a slightly sweet taste. Two or three bread fruit trees will suffice for a man's yearly supply. There are several varieties, one of which is called *Jaco tree*.

Cacao, (Cacao Theobroma.)

The chocolate tree is a beautiful tree, sixteen to twenty feet in height, resembling the cherry tree in its form and leaves; a native of South America and of Mexico; it is splendid when in bloom. The fruit is an oval pointed pod, enclosing from ten to thirty compressed nuts, an inch in diameter, enveloped in a sweet and refreshing pulp. The nuts when roasted and ground, are moulded into chololate cakes, a highly nutritious, wholsome, and delicious food. In France, small cakes of chocolate, sweetened with sugar, and of various fanciful forms, are prepared for eating. They are a portable food, of a nutritious quality, and delicious taste, and in great demand. Napoleon, on his retreat from Moscow, was once preserved from dying with hunger, by a few of these cakes which he carried in his pocket. Bryan Edwards, in his History of the West Indies, relates the case of a negro in Jamaica, who died at the age of 120; the last thirty years of which, he had lived on chocolate.

Yam, (Dioscoreau.)

The yam is a climbing plant, a native of the East and West Indies. The roots are very large, sometimes enormous, and flattened in form. It is boiled or roasted like the potato, and is a wholesome, nutritious, and palatable food. The flour or starch is used for puddings and for bread.

Rural Library.

THIS is a Monthly Periodical of 32 large octavo pages, devoted to the republication of the best works on Agriculture, Gardening, and Domestic Economy. The plan embraces abridgments and compilations, as well as entire works; and for a very trifling sum will insure every subscriber a valuable library, that would, on the ordinary plan, cost ten times the amount. It will be embellished with numerous engravings. The second number will soon be ready for delivery at the Agricultural Seed Store, 102 Barclay-street, New-York.

Feb. 1836.—f4t H. HUXLEY & CO.

1000,000 Silk Worm Eggs,

FOR SALE.

THE subscriber having promised to supply so many individuals who called to see his worms at work last year, and he having already sold so many, deems it proper to advise those who have not yet received any, and are intending to have some, that they must order them at once, or possibly they will be disappointed, the demand being so great, and this being the proper season to forward them. They are sold for 25 cents a thousand. Orders enclosing the amount will be punctually attended to.

JAMES HOUGHTON.

Rochester, Jan. 7, 1836. j7rf3m

Robbins' Planting Machine.

WITH this Machine Corn, Beans, Peas, Broom Corn, Mangel Wurtzel, Turneps, Onions, and seeds of almost every description, can be planted with more system and correctness than can be done in the usual manner of planting with the hand and hoe. One man may easily plant five acres a day, placing the seeds any given distance apart, from two or more inches, and in rows two and a half feet apart.

Machines can be had by applying to Reynolds & Bateham, Rochester; C. N. Bement, Treasurer of the State Agricultural Society, Albany; Bushrod Buck, Lanesborough, Berkshire county, Mass.; and Daniel T. Buck, Lowville, Lewis county, agent and proprietor for making and vending said machines, at all of which places it is intended to keep a supply on hand.

Lowville, Nov. 24, 1835. nov 28-6m

Monroe Horticultural Garden & NURSERY.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, &c. &c.

ALSO—A few hundred of the Morus Multicaulis, or Chinese Mulberry, the White Italian Mulberry by the hunbred or thousand, Grape Vines of both native and foreign varieties, mosty of large size, for sale by the single vine, hundred or thousand, at reduced prices. The subscriber has a large collection of Green-House Plants of choice and select varieties, and in good condition.

☞ Orders for *Mr.* Rowe's Nursery received by the Publisher of this paper.

Catalogues will be sent to those who wish them, gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

Greece, *Mo*nroe co. N. Y. Sept. 13, 1834.